- 1 -

## SEQUENCE LISTING

```
<110> Heidecker, Leonora
    5
                     van den Eynde, Benoît
                     Boon-Falleur, Thierry
                     Brasseur, Francis
               <120> MAGE-A12 ANTIGENIC PEPTIDES AND USES THEREOF
   10
               <130> L0461/7097
               <150> US 60/160,374
               <151> 1999-10-19
   15
               <150> US 60/179,570
               <151> 2000-02-01
               <160> 56
   20
               <170> FastSEQ for Windows Version 3.0
:[]
Han dan
               <210> 1
               <211> 4523
25
               <212> DNA
               <213> Homo sapiens
               <220>
               <221> CDS
::
               <222> (2960)...(3904)
   30
===
=;
               <400>1
===
         tggcctggga cccgcagcca ttctctacaa ggggtgcagc tgtgcaaatg cacagacgtt
                                                                                 60
:I)
         acagaaacag agtateteet gecaateaet teatecaaca gecaggagtg aggaagagga
                                                                                120
   35
         ccctcttgag tgaggactga gggtccaccc tcccccacgt agtgaccaca gaatccagct
                                                                                180
         cagtecetet tgteageeet getaaaetta ggeaataatg teaceeegae egeaceeete
                                                                                240
         ccccagtgcc acttcagggg gactcagagt cagagacttg gtctgagggg agcagacaca
                                                                                300
         atcggcagag gatggcggtc caggctcagc ctggcatcca agtcaggacc ttgagggatg
                                                                                360
         accaaaggcc cctcccaccc ccaactcccc caaccccacc aggatctaca gcctcatgat
                                                                                420
   40
         ccccgtccct atccctaccc ctacccccaa caccatcttc atcgttacct ccacctccat
                                                                                480
         ctggatcccc atccaggaag aatccagttc cacccctgct gtgaacccag ggaagtcacg
                                                                               540
         gggccggatg tgacgccact gacttgcgcg ttggaggtca gagaacaqcq aqattctcqc
                                                                               600
         cctgagcaac ggcctgacgt cggcggaggg aagcaggcgc aggctccqtq aggaggcaaq
                                                                               660
         gtaagatgcc gagggaggac tgaggcgggc ctcaccccag acagagggcc cccaataatc
                                                                               720
   45
         cagegetgee tetgetgeea ggeetggace accetgeagg ggaagaette teaggeteag
                                                                               780
         tegecaceae etcaceeege caceeeege egetttaaee geagggaaet etggtgtaag
                                                                               840
         agctttgtgt gaccagggca gggctggtta gaagtgctca gggcccagac tcagccagga
                                                                               900
         atcaaggtca ggaccccaag aggggactga gggtaacccc cccgcacccc caccactt
                                                                               960
         cccatcccc aacaccaacc ccaccccat ccccaacac caaacccacc accatcgctc
                                                                              1020
   50
         aaacatcaac ggcaccccca aaccccgatt cccatcccca cccatcctgg cagaatcgga
                                                                              1080
         gctttgcccc tgcaatcaac ccacggaagc tccgggaatg gcggccaagc acgcggatcc
                                                                              1140
         tgacgttcac atctgtggct cagggaggga agggggtcgg tatcgtgagt acggcctttg
                                                                              1200
        ggaagcagag gatgggccca agcccctcct ggaagataat ggagtccgga gggctcccag
                                                                              1260
         catgccagga caggggccca aagtacccct gtctcaaact gagccacctt ttcattcggc
                                                                              1320
   55
        cgcgggaatc ctagggatac agacccactt cagcagggag ttggagccca gccctgcgag
                                                                              1380
        gagtcaaggg gaggaagaag agggaggact gaggggacct tggagtccag atcagtggca
                                                                              1440
        accttgggct gggggatcct gggcacagtg gcctaatgtg ccccatgctc attgcgactt
                                                                              1500
        cagggtgaca gatttgcggg ctgtggtctg aggagtggca cttcaggtca gcagagggag
                                                                              1560
        gaatcccagg atctgccgga cccaaggtgt gccccttta tgaggactgg ggatacccc
                                                                              1620
   60
        ggcccagaaa gaagggatgc cacagagtct ggctgtccct tattcttagc tctaagggaa
                                                                              1680
```

	5	ccggatcaga gatagctcca attggcaatc tcatttgtac cacaggcagg aggttgggga accetcaggg agataaggtg ttggtgtaaa gaggagctgt ctgctcattt cagggggttg ggggttgagg aagggcagtc cccggcagga gtaaagatga gtaacccaca ggaggccatc agaagcetca ccctagaacc aaaggggtca gccctggaca acctacctgg gagtgacagg atgtgggetcc tcctcacttc tgtttccaga tctcagggag ttgaggtcct tttcttcaga gggtgactca ggtcaacaca ggggccccca tgtagtcgac agacacagtg gtcctaagat ctaccaagca tccaggtgag aagcctgagg taggattgag ggtacccctg ggccagaacg ctgacagagg gcccacaga aatctgccct gcccctgcta ttccctcaga gagcctgggg caaggctacc tgctgaggtc cctccattat cctgggatct ttgatgtcag ggaaagggag gccttggtct gaaggggctg cactcaggtc actagacgga ggttctcagg ccctagcagg agtagtggtg aggaccaagc aggctcgtca cccaggacac ctggactcca atgaatttgg acatctctca ttgtcctttg tgggaggatc tggttatgta tggccagatg ttggtccct	1740 1800 1860 1920 1980 2040 2100 2160 2220 2340 2400
	15	catatcette tgtacegtat cagggatgtg aattettgee atgagagttt etttggeeag caaaagggeg gtattaggee etgeaaggag aaaggtgagg geeetgagtg ageacagaag gaceeteeae eecagtagag tggggaeete acagagtetg geegaeeete etgacaattt tgggaatetg tggetgtaet tgeagtetge accetgagge ecatggatte eteteetagg aateaggagt teeaagaaca aggeagtgag geettggtet gaggeagtgt eetgaggtea eagageagag	2460 2520 2580 2640 2700 2760
Hart that the last	20	cgcaccggcc ccagaacaca tggactccag agggcctggc ctcaccctcc ctactgtcat tccttcagcc tcagcatgtg ctggccggct gtaccctgag gcgccctctc acttgttcct tcaggttctg aggagacagg ccccggagca gcactagctc ctgcccacac tcctacctgc tgccctgacc agagtcatc atg cca ctt gag cag agg agt cag cac tgc aag  Met Pro Leu Glu Gln Arg Ser Gln His Cys Lys  1 5 10	2820 2880 2940 2992
The state of the s	25	cct gag gaa ggc ctt gag gcc caa gga gag gcc ctg ggc ttg gtg ggt Pro Glu Glu Gly Leu Glu Ala Gln Gly Glu Ala Leu Gly Leu Val Gly 15 20 25	3040
	30	gcg cag gct cct gct act gag gag cag gag act gcc tcc tcc tct Ala Gln Ala Pro Ala Thr Glu Glu Glu Thr Ala Ser Ser Ser 30 35 40	3088
# # # # # # # # # # # # # # # # # # #	35	act cta gtg gaa gtc acc ctg cgg gag gtg cct gct gcc gag tca cca Thr Leu Val Glu Val Thr Leu Arg Glu Val Pro Ala Ala Glu Ser Pro 45 50 55	3136
	40	agt cct ccc cac agt cct cag gga gcc tcc acc ctc ccc act acc atc Ser Pro Pro His Ser Pro Gln Gly Ala Ser Thr Leu Pro Thr Thr Ile 60 65 70 75	3184
	45	aac tat act ctc tgg agt caa tcc gat gag ggc tcc agc aac gaa gaa Asn Tyr Thr Leu Trp Ser Gln Ser Asp Glu Gly Ser Ser Asn Glu Glu 80 85 90	3232
	43	cag gaa ggg cca agc acc ttt cct gac ctg gag acg agc ttc caa gta Gln Glu Gly Pro Ser Thr Phe Pro Asp Leu Glu Thr Ser Phe Gln Val 95 100 105	3280
	50	gca ctc agt agg aag atg gct gag ttg gtt cat ttt ctg ctc ctc aag Ala Leu Ser Arg Lys Met Ala Glu Leu Val His Phe Leu Leu Leu Lys 110 115 120	3328
	55	tat cga gcc agg gag cca ttc aca aag gca gaa atg ctg ggg agt gtc Tyr Arg Ala Arg Glu Pro Phe Thr Lys Ala Glu Met Leu Gly Ser Val 125 130 135	3376
	60	atc aga aat ttc cag gac ttc ttt cct gtg atc ttc agc aaa gcc tcc Ile Arg Asn Phe Gln Asp Phe Phe Pro Val Ile Phe Ser Lys Ala Ser 140 145 150 155	3424

	5															gtc Val 170		3472
	J		-		_				_		_	_				tac Tyr	-	3520
	10		_	_		_		_				_				ctg Leu		3568
	15															gag Glu		3616
2 m	20															agg Arg		3664
and they teed they	25															ttg Leu 250		3712
The state of the s																cct Pro		3760
	30															agc Ser		3808
The state of the s	35															cac His		3856
	40		tac Tyr							_		_			-	gag Glu	tga *	3904
	45	aggo aaga atci cago taag	ccta agago tttgt catco gagto	atc cag to cag to caa g	catta cagt cctgt gttta gtttt	igttt attg itgga itgaa ittat	c ca gt ta na tt nt ga ct ca	ictgo igtag igtto icagt igatt	ctcg stgag aaat agtc	tgt ttt gtt aca aaa	gaca ctgt cctt cctt cata	tga tct tta gtg	ggcc attg acgg ctgt catt	catt gatg gatg sttat sttgt	ct t gac t gtt g at a	cact ttga gaatg igttt ittgt	etteca ectttg agattt gaactt aggag egacaa	3964 4024 4084 4144 4204 4264
	50	gaga ctgt gaga	ataaa caaat	aga o tt g	ctca gaaaa atctg	agaa aaaa gaata	ig tt ig co ia at	aaaa Itgga	gata itacc	ctt tgg	aatt	ctt	gcct	tata ettet	cc t	cact jagaa	atacat tcatt atttaa cattca	4324 4384 4444 4504
	55		<2 <2	210> 211> 212> 213>	314 PRT	sap	oiens	<b>3</b>										
	60	Met		l00> Leu		Gln	Arg	Ser	Gln	His	Cys	Lys	Pro	Glu	Glu	Gly	Leu	

10

```
Glu Ala Gln Gly Glu Ala Leu Gly Leu Val Gly Ala Gln Ala Pro Ala
                                        25
        Thr Glu Glu Gln Glu Thr Ala Ser Ser Ser Thr Leu Val Glu Val
   5
                                   40
        Thr Leu Arg Glu Val Pro Ala Ala Glu Ser Pro Ser Pro Pro His Ser
                               55
                                                  60
        Pro Gln Gly Ala Ser Thr Leu Pro Thr Thr Ile Asn Tyr Thr Leu Trp
                           70
                                               75
  10
        Ser Gln Ser Asp Glu Gly Ser Ser Asn Glu Glu Glu Gly Pro Ser
                      85
                                90
        Thr Phe Pro Asp Leu Glu Thr Ser Phe Gln Val Ala Leu Ser Arg Lys
                   100
                                       105
        Met Ala Glu Leu Val His Phe Leu Leu Leu Lys Tyr Arg Ala Arg Glu
  15
                                   120
                                                      125
        Pro Phe Thr Lys Ala Glu Met Leu Gly Ser Val Ile Arg Asn Phe Gln
                               135
        Asp Phe Phe Pro Val Ile Phe Ser Lys Ala Ser Glu Tyr Leu Gln Leu
                           150
                                               155
20
        Val Phe Gly Ile Glu Val Val Glu Val Val Arg Ile Gly His Leu Tyr
                       165
                                           170
:I
        Ile Leu Val Thr Cys Leu Gly Leu Ser Tyr Ala Gly Leu Leu Gly Asp
ij
                                       185
        Asn Gln Ile Val Pro Lys Thr Gly Leu Leu Ile Ile Val Leu Ala Ile
1 25
                                    200
100
        Ile Ala Lys Glu Gly Asp Cys Ala Pro Glu Glu Lys Ile Trp Glu Glu
                                215
        Leu Ser Val Leu Glu Ala Ser Asp Gly Arg Glu Asp Ser Val Phe Ala
= i
                           230
                                              235
        His Pro Arg Lys Leu Leu Thr Gln Asp Leu Val Gln Glu Asn Tyr Leu
jul.
                        245
                                         250
Glu Tyr Arg Gln Val Pro Gly Ser Asp Pro Ala Cys Tyr Glu Phe Leu
==
                                       265
:[]
        Trp Gly Pro Arg Ala Leu Val Glu Thr Ser Tyr Val Lys Val Leu His
                                   280
                                                       285
        His Leu Leu Lys Ile Ser Gly Gly Pro His Ile Pro Tyr Pro Pro Leu
                               295
        His Glu Trp Ala Phe Arg Glu Gly Glu Glu
  40
              <210> 3
              <211> 9
              <212> PRT
              <213> Homo sapiens
  45
              <400> 3
        Glu Val Val Arg Ile Gly His Leu Tyr
  50
              <210> 4
              <211> 9
              <212> PRT
              <213> Homo sapiens
  55
              <400> 4
        Val Arg Ile Gly His Leu Tyr Ile Leu
              <210> 5
  60
              <211> 10
```

```
<212> PRT
              <213> Homo sapiens
              <400> 5
   5
        Val Val Arg Ile Gly His Leu Tyr Ile Leu
              <210> 6
              <211> 8
  10
              <212> PRT
              <213> Homo sapiens
              <400> 6
        Arg Ile Gly His Leu Tyr Ile Leu
  15
              <210> 7
              <211> 24
              <212> DNA
  20
              <213> Homo sapiens
House House II II
              <400> 7
        gggtccaaat tgttggcttt cact
                                                                                   24
25
H
              <210> 8
              <211> 22
              <212> DNA
              <213> Homo sapiens
m i
∷ 30
              <400> 8
=±
                                                                                   22
        gaagaatgcc tcatgatccc ca
<210> 9
=i
35
              <211> 9
              <212> PRT
              <213> Homo sapiens
              <400> 9
        Glu Ala Asp Pro Thr Gly His Ser Tyr
  40
              <210> 10
              <211> 9
              <212> PRT
  45
              <213> Homo sapiens
              <400> 10
        Ser Ala Tyr Gly Glu Pro Arg Lys Leu
  50
              <210> 11
              <211> 9
              <212> PRT
              <213> Homo sapiens
  55
              <400> 11
        Glu Val Asp Pro Ile Gly His Leu Tyr
  60
              <210> 12
```

```
<211> 9
              <212> PRT
              <213> Homo sapiens
   5
              <400> 12
        Phe Leu Trp Gly Pro Arg Ala Leu Val
              <210> 13
  10
              <211> 10
              <212> PRT
              <213> Homo sapiens
              <400> 13
  15
       Met Glu Val Asp Pro Ile Gly His Leu Tyr
              <210> 14
              <211> 9
 20
              <212> PRT
25
              <213> Homo sapiens
              <400> 14
       Ala Ala Arg Ala Val Phe Leu Ala Leu
             <210> 15
             <211> 8
===
              <212> PRT
∷ 30
             <213> Homo sapiens
===
             <400> 15
==
       Tyr Arg Pro Arg Pro Arg Arg Tyr
135
                          5
             <210> 16
             <211> 10
             <212> PRT
             <213> Homo sapiens
 40
             <400> 16
       Ser Pro Ser Ser Asn Arg Ile Arg Asn Thr
 45
             <210> 17
             <211> 9
             <212> PRT
             <213> Homo sapiens
 50
             <400> 17
       Val Leu Pro Asp Val Phe Ile Arg Cys
             <210> 18
 55
             <211> 10
             <212> PRT
             <213> Homo sapiens
             <400> 18
 60
       Val Leu Pro Asp Val Phe Ile Arg Cys Val
```

```
1
                              5
                                                  10
                 <210> 19
                 <211> 9
     5
                 <212> PRT
                 <213> Homo sapiens
                 <400> 19
          Glu Glu Lys Leu Ile Val Val Leu Phe
    10
                <210> 20
                 <211> 9
                 <212> PRT
    15
                <213> Homo sapiens
                <400> 20
          Glu Glu Lys Leu Ser Val Val Leu Phe
    20
Hall Book that good
                <210> 21
                <211> 10
                <212> PRT
                <213> Homo sapiens
   25
                <400> 21
          Ala Cys Asp Pro His Ser Gly His Phe Val
            1
                             5
===
11
   30
                <210> 22
===
                <211> 10
<u>-</u>
                <212> PRT
==
                <213> Homo sapiens
35
                <400> 22
          Ala Arg Asp Pro His Ser Gly His Phe Val
            1
                <210> 23
    40
                <211> 9
                <212> PRT
                <213> Homo sapiens
                <400> 23
   45
          Ser Tyr Leu Asp Ser Gly Ile His Phe
                <210> 24
                <211> 9
   50
                <212> PRT
                <213> Homo sapiens
                <400> 24
         Ser Tyr Leu Asp Ser Gly Ile His Ser
   55
                <210> 25
                <211> 9
                <212> PRT
   60
                <213> Homo sapiens
```

```
<400> 25
          Met Leu Leu Ala Val Leu Tyr Cys Leu
     5
                 <210> 26
                 <211> 9
                 <212> PRT
                 <213> Homo sapiens
    10
                 <400> 26
          Tyr Met Asn Gly Thr Met Ser Gln Val
    15
                 <210> 27
                 <211> 9
                 <212> PRT
                 <213> Homo sapiens
                 <400> 27
A H offer and they had been the
          Ala Phe Leu Pro Trp His Arg Leu Phe
                 <210> 28
                 <211> 9
                 <212> PRT
                 <213> Homo sapiens
A H H H Hough H H H H H H H
                 <400> 28
          Ser Glu Ile Trp Arg Asp Ile Asp Phe
            1
                 <210> 29
                 <211> 9
    35
                 <212> PRT
                 <213> Homo sapiens
                 <400> 29
          Tyr Glu Ile Trp Arg Asp Ile Asp Phe
    40
                 <210> 30
                 <211> 15
                 <212> PRT
                 <213> Homo sapiens
    45
                 <400> 30
          Gln Asn Ile Leu Leu Ser Asn Ala Pro Leu Gly Pro Gln Phe Pro
                                                    10
    50
                 <210> 31
                 <211> 15
                 <212> PRT
                 <213> Homo sapiens
    55
                 <400> 31
          Asp Tyr Ser Tyr Leu Gln Asp Ser Asp Pro Asp Ser Phe Gln Asp
                                                    10
    60
                 <210> 32
```

```
<212> PRT
                                                              <213> Homo sapiens
               5
                                                              <400> 32
                                   Glu Ala Ala Gly Ile Gly Ile Leu Thr Val
                                                              <210> 33
            10
                                                              <211> 9
                                                              <212> PRT
                                                              <213> Homo sapiens
                                                              <400> 33
            15
                                    Ala Ala Gly Ile Gly Ile Leu Thr Val
                                                              <210> 34
                                                              <211> 9
            20
                                                              <212> PRT
                                                              <213> Homo sapiens
The state of the s
                                                              <400> 34
                                     Ile Leu Thr Val Ile Leu Gly Val Leu
            25
                                                                                                                5
                                                              <210> 35
                                                              <211> 9
                                                              <212> PRT
                                                              <213> Homo sapiens
H H H H Hoop H H H H H
                                                              <400> 35
                                     Lys Thr Trp Gly Gln Tyr Trp Gln Val
            35
                                                              <210> 36
                                                              <211> 9
                                                              <212> PRT
                                                              <213> Homo sapiens
            40
                                                              <400> 36
                                     Ile Thr Asp Gln Val Pro Phe Ser Val
            45
                                                              <210> 37
                                                              <211> 9
                                                              <212> PRT
                                                               <213> Homo sapiens
             50
                                                               <400> 37
                                     Tyr Leu Glu Pro Gly Pro Val Thr Ala
                                                                                                                 5
                                                               <210> 38
             55
                                                               <211> 10
                                                               <212> PRT
                                                               <213> Homo sapiens
                                                               <400> 38
             60
                                     Leu Leu Asp Gly Thr Ala Thr Leu Arg Leu
```

<211> 10

```
10
                            5
           1
               <210> 39
               <211> 10
               <212> PRT
               <213> Homo sapiens
               <400> 39
         Val Leu Tyr Arg Tyr Gly Ser Phe Ser Val
   10
                            5
               <210> 40
               <211> 9
               <212> PRT
   15
               <213> Homo sapiens
               <400> 40
         Leu Tyr Val Asp Ser Leu Phe Phe Leu
   20
               <210> 41
R R Defreg goal Berg god berg to Co.
               <211> 12
               <212> PRT
               <213> Homo sapiens
   25
               <400> 41
         Lys Ile Ser Gly Gly Pro Arg Ile Ser Tyr Pro Leu
::
               <210> 42
m.
               <211> 9
<212> PRT
               <213> Homo sapiens
               <400> 42
   35
         Tyr Met Asp Gly Thr Met Ser Gln Val
           1
               <210> 43
               <211> 11
   40
                <212> PRT
                <213> Homo sapiens
                <400> 43
         Ser Leu Leu Met Trp Ile Thr Gln Cys Phe Leu
   45
                <210> 44
                <211> 9
                <212> PRT
   50
                <213> Homo sapiens
                <400> 44
         Ser Leu Leu Met Trp Ile Thr Gln Cys
                            5
   55
                <210> 45
                <211> 9
                <212> PRT
   60
                <213> Homo sapiens
```

```
<400> 45
          Gln Leu Ser Leu Leu Met Trp Ile Thr
     5
                 <210> 46
                 <211> 20
                 <212> DNA
                 <213> Homo sapiens
    10
                 <400> 46
                                                                                         20
          cctacctgct gccctgacca
                 <210> 47
    15
                 <211> 20
                 <212> DNA
                 <213> Homo sapiens
                 <400> 47
    20
                                                                                         20
          cctaaggact gtggggagga
T. B. Heller and Born the Bord Hers H. H.
                 <210> 48
                 <211> 20
                 <212> DNA
    25
                 <213> Homo sapiens
                 <400> 48
                                                                                         20
          ccaactaagc catcttccta
<210> 49
    30
                 <211> 20
                 <212> DNA
                 <213> Homo sapiens
35
                 <400> 49
                                                                                          20
          gtgacaagga tctacaagtg
                 <210> 50
                 <211> 20
    40
                 <212> DNA
                 <213> Homo sapiens
                 <400> 50
                                                                                          20
          ccagtcaggt gacaaggatg
    45
                 <210> 51
                 <211> 20
                 <212> DNA
                 <213> Homo sapiens
    50
                 <400> 51
                                                                                          20
          cctgtctagg gcacgatctg
                 <210> 52
    55
                 <211> 20
                 <212> DNA
                 <213> Homo sapiens
                 <400> 52
                                                                                          20
    60
          ctcctaaggg gcacagtcgc
```

		<210> 53
		<211> 20
		<212> DNA
	5	<213> Homo sapiens
		<400> 53
		tcagatgcct acaacacact
	10	<210> 54
		<211> 20
		<212> DNA
		<213> Homo sapiens
		1223
	15	<400> 54
	10	ggaccctaca ggaactcgta
		3340000404 3344000304
		<210> 55
		<211> 33
	20	<211> 20
1	20	<213> Homo sapiens
in the		(213) Home Daptells
£		<400> 55
=======================================		cgttggaggt cagagaacag
4	25	caccagagge cagagaacag
Men	20	
=		<210> 56
Start II II Vices that any they that		<211> 22
Ė		<212> DNA
	30	<213> Homo sapiens
:	50	12137 Homo Baptells
į		<400> 56
: :		gccctccact gatctttagc aa
=		goodeace gacoccage da
. Ē		
tan 'and and and		
1		